CLAIMS

1. A method for selecting a modulation detector in a receiver which comprises at least a first and a second detector, the method comprising the steps of

determining at least one cross-correlation value between a stored training sequence and at least one training sequence of a received signal, **characterized** by

selecting a detector used for detecting a signal to be received on the basis of the determined at least one cross-correlation value.

2. A method as claimed in claim 1, **characterized** in that the step of determining at least one cross-correlation value comprises the steps of

searching an ideal synchronization point of the received signal, at which point the cross-correlation between the training sequence of the received signal and the stored training sequence has the maximum value, and

calculating the cross-correlation value between the stored training sequence and the training sequence of the received signal, which is obtained by shifting the synchronization point of the received signal for one symbol sequence forwards from the ideal synchronization point, and/or

calculating the cross-correlation value between the stored training sequence and the training sequence of the received signal, which is obtained by shifting the synchronization point of the received signal for one symbol sequence backwards from the ideal synchronization point.

3. A method as claimed in claim 1 or 2, **characterized** in that the received signal is a complex signal, whereby at least one cross-correlation value to be determined is a complex cross-correlation value.

4. A method as claimed in claim 3, **characterized** by

performing the step of determining at least one cross-correlation value for a given number of training sequences of the received signal,

calculating an absolute value of the average of the determined cross-correlation values, and

selecting the first detector for the detection of the signal to be received if the absolute value of the average of the cross-correlation values exceeds a preset limit value, and the second detector if the absolute value of the average of the cross-correlation values is below a preset limit value.

5. A method as claimed in claim 3 or 4, **characterized** in that the first detector includes a channel equalizer.

6. A receiver which comprises

a first (103A) and a second (103B) modulation detector,

means (100) for determining at least one cross-correlation value between at least one training sequence (21) of a received signal (IN) and a stored training sequence, **characterized** in that the receiver further comprises

means (102) for selecting the detector (103A, 103B) used for the detection of the signal to be received in response to the determined at least one cross-correlation value.

7. A receiver as claimed in claim 6, **characterized** in that the means (100) for determining at least one cross-correlation value are arranged

to search an ideal synchronization point of the received signal (IN), at which point the cross-correlation between the training sequence (21) of the received signal and the stored training sequence has the maximum value, and

to calculate the cross-correlation value between the stored training sequence and the training sequence of the received signal, which is obtained by shifting the synchronization point of the received signal for one symbol sequence forwards from the ideal synchronization point, and/or

to calculate the cross-correlation value between the stored training sequence and the training sequence of the received signal, which is obtained by shifting the synchronization point of the received signal for one symbol sequence backwards from the ideal synchronization point.

8. A receiver as claimed in claim 6 or 7, **characterized** in that the received signal (IN) is a complex signal, whereby at least one cross-correlation value to be determined is a complex cross-correlation value.

9. A receiver as claimed in claim 8, **characterized** by further comprising means (101) that are arranged

to collect a predetermined number of cross-correlation values determined from the training sequences of the received signal and

to calculate an absolute value of the average of the determined cross-correlation values, whereby the means (102) for selecting the detector are arranged

to select the first detector (103A) for the detection of the signal to be received if the absolute value of the average of the cross-correlation values

exceeds a preset limit value, and the second detector (103B) if the absolute value of the average of the cross-correlation values is below a preset limit value.

10. A receiver as claimed in claim 8 or 9, **characterized** in that the first detector (103A) includes a channel equalizer.

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